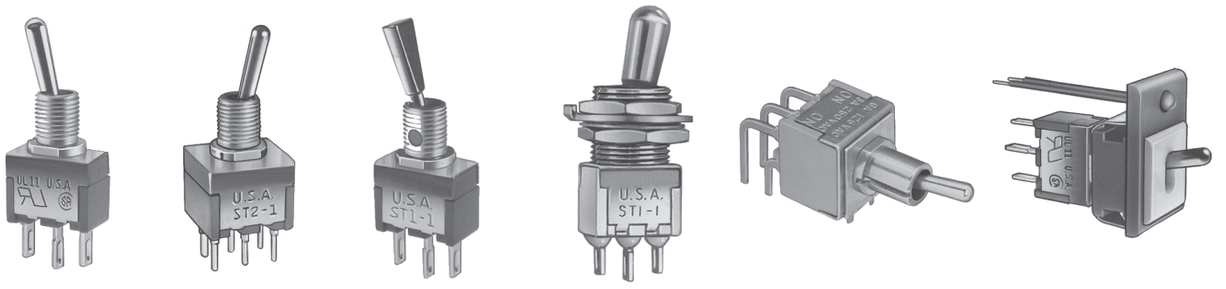
ST SERIES - MINIATURE TOGGLE SWITCHES

A



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

FEATURES

- **Dry circuit through power ratings .**
- **Ultra-rugged construction SPDT & DPDT models with numerous options.**
- **Panel, panel & p.c. and p.c. mounting models, lighted and unlighted.**

SPECIFICATIONS

Contact ratings (resistive loads):	(Q) power models - coin silver: 6 Amps at 125 VAC, 3 Amps at 250 VAC or 7 Amps at 30 VDC. (B) dry circuit models - gold over nickel over brass: 0.4 VA max. at 20 V max. UL models - coin silver: 6 Amps at 125 VAC or 3 Amps at 250 VAC (75% power factor). UL file no. E66367. CSA models - coin silver: same ratings as UL models. CSA file no. LR54592-1.
Initial contact resistance:	3 milliohms max. at 3 VDC, 0.1 Amp.
Insulation resistance:	Greater than 200,000 megohms between terminals & case ground.
Dielectric strength:	Greater than 2000 VAC for 1 minute between terminals & case ground.
Electrical life (resistive loads):	100,000 cycles min.for ST1-1 & ST2-1. Other models, 40,000 cycles min.
Operating temperature range:	-30°C to +85°C

MATERIALS

Contacts:	Coin silver for power,UL & CSA models. Gold over nickel over brass for dry circuit models.
Actuator:	Brass, bright nickel or chrome plated.
Bushing:	Nickel plated brass
Strap:	Stainless steel
Case:	Melamine Phenolic, color red
Terminal seal:	Epoxy (optional)
Support bracket:	Brass or steel, tin plated
Spring mounting bracket:	Stainless steel
Bezel & bezel insert:	Nylon. Available in black, red & white. Consult factory for other colors.
Hardware:	See 'Miscellaneous' section.
LED:	Intensity: 2.0 mcd at 10 mA. Forward voltage: 2.0V (3.0V max.). Max. continuous forward current: 15 mA for red, 30 mA for green & 20 mA for yellow. Red is standard. Yellow & green are optional. Specifications are subject to change without notice - consult factory.

AGENCY RECOGNITION

UL, & CSA. Marking: Switches ordered by UL model number are supplied with recognition marking. Switches ordered by UL model no. and with '/CSA' added at end of model no. are supplied with both recognitions marked.

ABOUT THIS SERIES

The material in this series is organized in the following sequence:

a. Completely specified switch models b. Miscellaneous c. 'build your own switch' order format
d. Option drawings & information e. Panel cut-outs

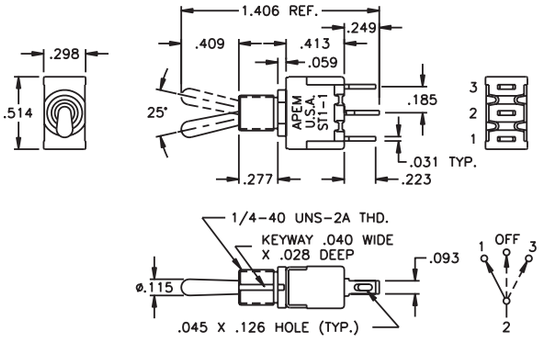
ST SERIES - MINIATURE TOGGLE SWITCHES

Solder lug terminals - panel mounting

SINGLE POLE

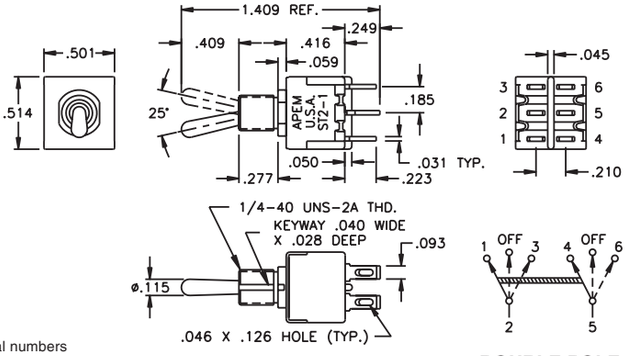
DOUBLE POLE

	POWER CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1KMZQ	UL11KMZQ	ON	NONE	ON
	ST1-2KMZQ	UL12KMZQ	ON	OFF	ON
	ST1-3KMZQ	UL13KMZQ	MOM	OFF	MOM
	ST1-4KMZQ	UL14KMZQ	ON	OFF	MOM
	ST1-5KMZQ	UL15KMZQ	ON	NONE	MOM
Double pole	ST2-1KMZQ	UL21KMZQ	ON	NONE	ON
	ST2-2KMZQ	UL22KMZQ	ON	OFF	ON
	ST2-3KMZQ	UL23KMZQ	MOM	OFF	MOM
	ST2-4KMZQ	UL24KMZQ	ON	OFF	MOM
	ST2-5KMZQ	UL25KMZQ	ON	NONE	MOM
	ST2-6KMZQ	UL26KMZQ	ON	ON	ON
	ST2-7KMZQ	UL27KMZQ	ON	ON	MOM
	ST2-8KMZQ	UL28KMZQ	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6



SINGLE POLE

Terminal numbers for reference only

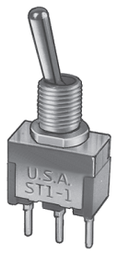


DOUBLE POLE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

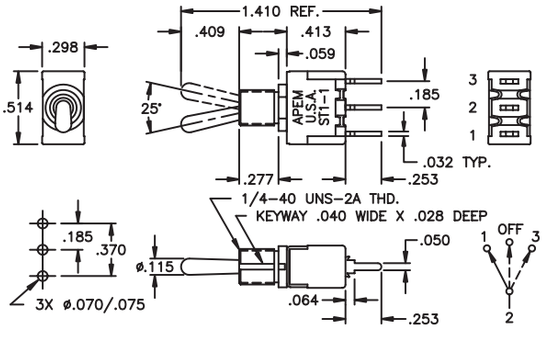
Straight p.c. terminals - panel mounting

SINGLE POLE



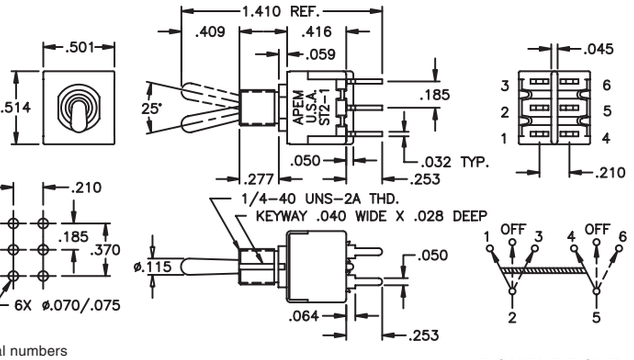
DOUBLE POLE

	DRY CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1KMCB	UL11KMCQ	ON	NONE	ON
	ST1-2KMCB	UL12KMCQ	ON	OFF	ON
	ST1-3KMCB	UL13KMCQ	MOM	OFF	MOM
	ST1-4KMCB	UL14KMCQ	ON	OFF	MOM
	ST1-5KMCB	UL15KMCQ	ON	NONE	MOM
Double pole	ST2-1KMCB	UL21KMCQ	ON	NONE	ON
	ST2-2KMCB	UL22KMCQ	ON	OFF	ON
	ST2-3KMCB	UL23KMCQ	MOM	OFF	MOM
	ST2-4KMCB	UL24KMCQ	ON	OFF	MOM
	ST2-5KMCB	UL25KMCQ	ON	NONE	MOM
	ST2-6KMCB	UL26KMCQ	ON	ON	ON
	ST2-7KMCB	UL27KMCQ	ON	ON	MOM
	ST2-8KMCB	UL28KMCQ	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6



SINGLE POLE

Terminal numbers for reference only



DOUBLE POLE

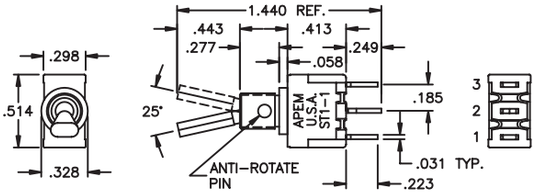
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Flatted actuator - panel mounting

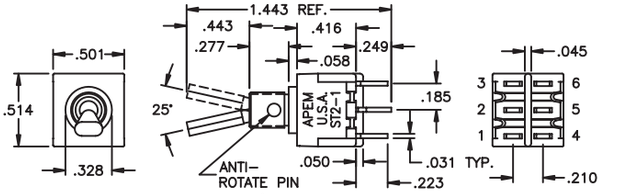
SINGLE POLE

DOUBLE POLE

	POWER CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1F1MZQ	UL11F1MZQ	ON	NONE	ON
	ST1-2F1MZQ	UL12F1MZQ	ON	OFF	ON
	ST1-3F1MZQ	UL13F1MZQ	MOM	OFF	MOM
	ST1-4F1MZQ	UL14F1MZQ	ON	OFF	MOM
	ST1-5F1MZQ	UL15F1MZQ	ON	NONE	MOM
Double pole	ST2-1F1MZQ	UL21F1MZQ	ON	NONE	ON
	ST2-2F1MZQ	UL22F1MZQ	ON	OFF	ON
	ST2-3F1MZQ	UL23F1MZQ	MOM	OFF	MOM
	ST2-4F1MZQ	UL24F1MZQ	ON	OFF	MOM
	ST2-5F1MZQ	UL25F1MZQ	ON	NONE	MOM
	ST2-6F1MZQ	UL26F1MZQ	ON	ON	ON
	ST2-7F1MZQ	UL27F1MZQ	ON	ON	MOM
	ST2-8F1MZQ	UL28F1MZQ	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6



SINGLE POLE



DOUBLE POLE

Terminal numbers for reference only

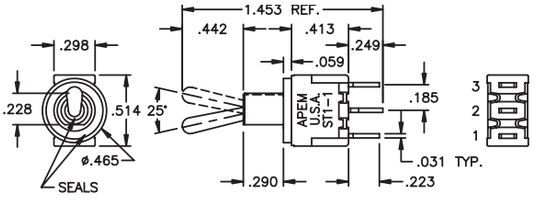
Splashproof bushing - panel mounting

An 'o'-ring placed internally between the actuator and the bushing, and a gasket placed externally between the bushing flange and mounting panel provides static protection from 3.3 ft. (1 meter) of water for 30 minutes.

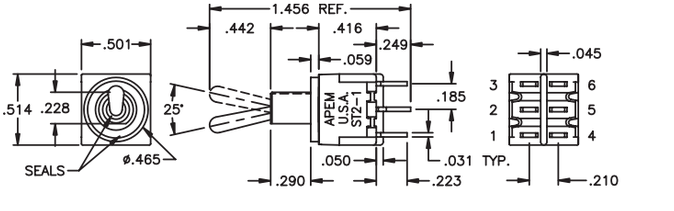
SINGLE POLE

DOUBLE POLE

	POWER CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1KHZQ	UL11KHZQ	ON	NONE	ON
	ST1-2KHZQ	UL12KHZQ	ON	OFF	ON
	ST1-3KHZQ	UL13KHZQ	MOM	OFF	MOM
	ST1-4KHZQ	UL14KHZQ	ON	OFF	MOM
	ST1-5KHZQ	UL15KHZQ	ON	NONE	MOM
Double pole	ST2-1KHZQ	UL21KHZQ	ON	NONE	ON
	ST2-2KHZQ	UL22KHZQ	ON	OFF	ON
	ST2-3KHZQ	UL23KHZQ	MOM	OFF	MOM
	ST2-4KHZQ	UL24KHZQ	ON	OFF	MOM
	ST2-5KHZQ	UL25KHZQ	ON	NONE	MOM
	ST2-6KHZQ	UL26KHZQ	ON	ON	ON
	ST2-7KHZQ	UL27KHZQ	ON	ON	MOM
	ST2-8KHZQ	UL28KHZQ	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6



SINGLE POLE



DOUBLE POLE

Terminal numbers for reference only

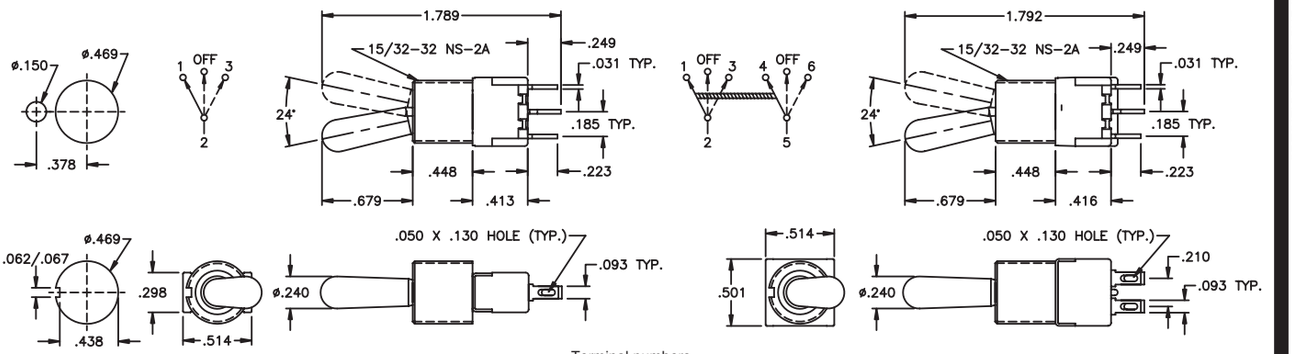
ST SERIES - MINIATURE TOGGLE SWITCHES

15/32" threaded bushing - panel mounting

SINGLE POLE WITH T1 ACTUATOR

DOUBLE POLE WITH T2 ACTUATOR

	POWER CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1T1M4ZQ	UL11T1M4ZQ	ON	NONE	ON
	ST1-2T1M4ZQ	UL12T1M4ZQ	ON	OFF	ON
	ST1-3T1M4ZQ	UL13T1M4ZQ	MOM	OFF	MOM
	ST1-4T1M4ZQ	UL14T1M4ZQ	ON	OFF	MOM
	ST1-5T1M4ZQ	UL15T1M4ZQ	ON	NONE	MOM
Double pole	ST2-1T1M4ZQ	UL21T1M4ZQ	ON	NONE	ON
	ST2-2T1M4ZQ	UL22T1M4ZQ	ON	OFF	ON
	ST2-3T1M4ZQ	UL23T1M4ZQ	MOM	OFF	MOM
	ST2-4T1M4ZQ	UL24T1M4ZQ	ON	OFF	MOM
	ST2-5T1M4ZQ	UL25T1M4ZQ	ON	NONE	MOM
	ST2-6T1M4ZQ	UL26T1M4ZQ	ON	ON	ON
	ST2-7T1M4ZQ	UL27T1M4ZQ	ON	ON	MOM
	ST2-8T1M4ZQ	UL28T1M4ZQ	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6



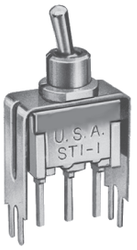
SINGLE POLE

Terminal numbers for reference only

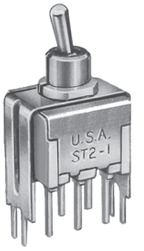
DOUBLE POLE

Straight p.c. terminals with bracket - p.c. mounting

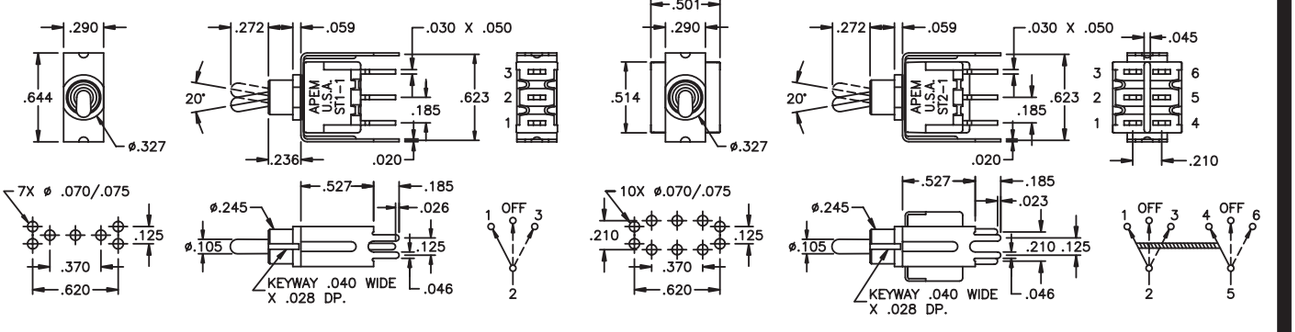
SINGLE POLE



DOUBLE POLE



	DRY CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1L3S3V30B	UL11L3S3V30Q	ON	NONE	ON
	ST1-2L3S3V30B	UL12L3S3V30Q	ON	OFF	ON
	ST1-3L3S3V30B	UL13L3S3V30Q	MOM	OFF	MOM
	ST1-4L3S3V30B	UL14L3S3V30Q	ON	OFF	MOM
	ST1-5L3S3V30B	UL15L3S3V30Q	ON	NONE	MOM
Double pole	ST2-1L3S3V30B	UL21L3S3V30Q	ON	NONE	ON
	ST2-2L3S3V30B	UL22L3S3V30Q	ON	OFF	ON
	ST2-3L3S3V30B	UL23L3S3V30Q	MOM	OFF	MOM
	ST2-4L3S3V30B	UL24L3S3V30Q	ON	OFF	MOM
	ST2-5L3S3V30B	UL25L3S3V30Q	ON	NONE	MOM
	ST2-6L3S3V30B	UL26L3S3V30Q	ON	ON	ON
	ST2-7L3S3V30B	UL27L3S3V30Q	ON	ON	MOM
	ST2-8L3S3V30B	UL28L3S3V30Q	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6



SINGLE POLE

Terminal numbers for reference only

DOUBLE POLE

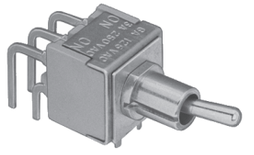
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

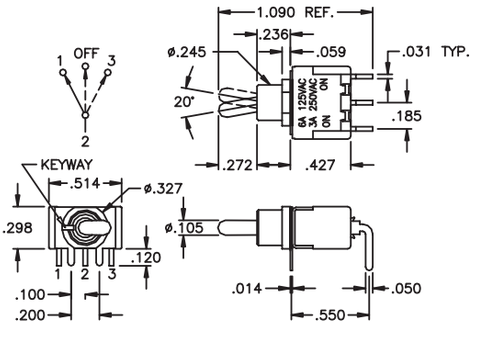
Horizontal right angle p.c. terminals - p.c. mounting

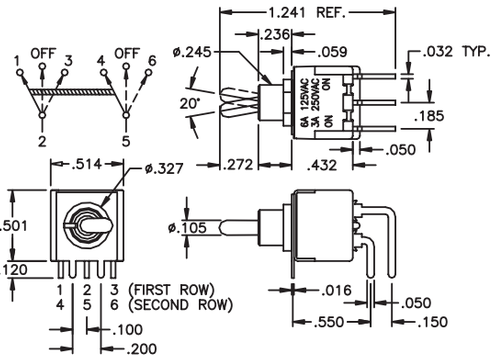
SINGLE POLE

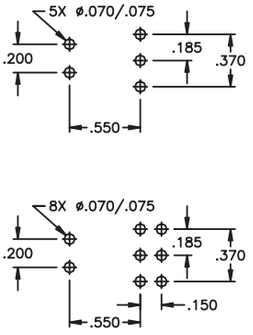
DOUBLE POLE



	DRY CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1L3S3AB	UL11L3S3AQ	ON	NONE	ON
	ST1-2L3S3AB	UL12L3S3AQ	ON	OFF	ON
	ST1-3L3S3AB	UL13L3S3AQ	MOM	OFF	MOM
	ST1-4L3S3AB	UL14L3S3AQ	ON	OFF	MOM
	ST1-5L3S3AB	UL15L3S3AQ	ON	NONE	MOM
Double pole	ST2-1L3S3AB	UL21L3S3AQ	ON	NONE	ON
	ST2-2L3S3AB	UL22L3S3AQ	ON	OFF	ON
	ST2-3L3S3AB	UL23L3S3AQ	MOM	OFF	MOM
	ST2-4L3S3AB	UL24L3S3AQ	ON	OFF	MOM
	ST2-5L3S3AB	UL25L3S3AQ	ON	NONE	MOM
	ST2-6L3S3AB	UL26L3S3AQ	ON	ON	ON
	ST2-7L3S3AB	UL27L3S3AQ	ON	ON	MOM
	ST2-8L3S3AB	UL28L3S3AQ	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6







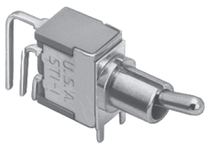
SINGLE POLE

Terminal numbers for reference only

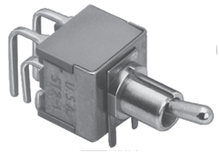
DOUBLE POLE

Vertical right angle p.c. terminals - p.c. mounting

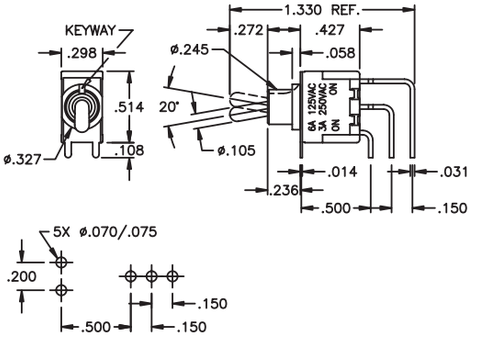
SINGLE POLE

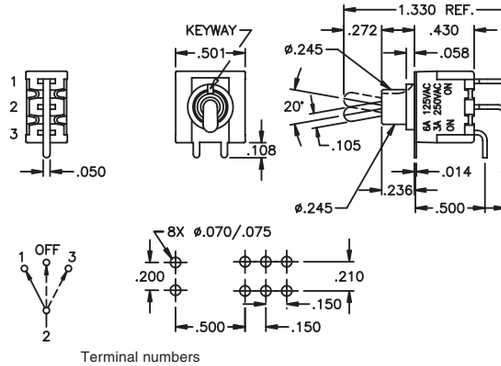


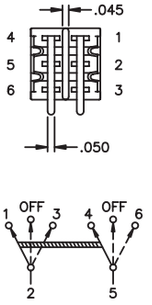
DOUBLE POLE



	DRY CKT. MODEL NO.	UL MODEL NO.			Key way
Single pole	ST1-1L3S3V-1B	UL11L3S3V-1Q	ON	NONE	ON
	ST1-2L3S3V-1B	UL12L3S3V-1Q	ON	OFF	ON
	ST1-3L3S3V-1B	UL13L3S3V-1Q	MOM	OFF	MOM
	ST1-4L3S3V-1B	UL14L3S3V-1Q	ON	OFF	MOM
	ST1-5L3S3V-1B	UL15L3S3V-1Q	ON	NONE	MOM
Double pole	ST2-1L3S3V-1B	UL21L3S3V-1Q	ON	NONE	ON
	ST2-2L3S3V-1B	UL22L3S3V-1Q	ON	OFF	ON
	ST2-3L3S3V-1B	UL23L3S3V-1Q	MOM	OFF	MOM
	ST2-4L3S3V-1B	UL24L3S3V-1Q	ON	OFF	MOM
	ST2-5L3S3V-1B	UL25L3S3V-1Q	ON	NONE	MOM
	ST2-6L3S3V-1B	UL26L3S3V-1Q	ON	ON	ON
	ST2-7L3S3V-1B	UL27L3S3V-1Q	ON	ON	MOM
	ST2-8L3S3V-1B	UL28L3S3V-1Q	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6







SINGLE POLE

Terminal numbers for reference only

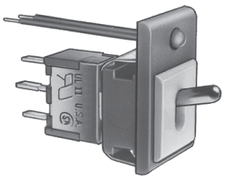
DOUBLE POLE

ST SERIES - MINIATURE TOGGLE SWITCHES

Snap-in bezel with outboard LED

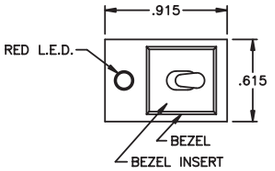
PATENT NO.
Des. 282,524

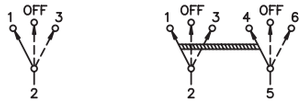
UL11KMZQJ6128



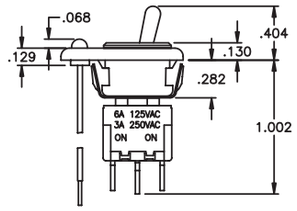
	POWER CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMZQJ6122	UL11KMZQJ6122	ON	NONE	ON
	ST1-2KMZQJ6122	UL12KMZQJ6122	ON	OFF	ON
	ST1-3KMZQJ6122	UL13KMZQJ6122	MOM	OFF	MOM
	ST1-4KMZQJ6122	UL14KMZQJ6122	ON	OFF	MOM
	ST1-5KMZQJ6122	UL15KMZQJ6122	ON	NONE	MOM
Double pole	ST2-1KMZQJ6122	UL21KMZQJ6122	ON	NONE	ON
	ST2-2KMZQJ6122	UL22KMZQJ6122	ON	OFF	ON
	ST2-3KMZQJ6122	UL23KMZQJ6122	MOM	OFF	MOM
	ST2-4KMZQJ6122	UL24KMZQJ6122	ON	OFF	MOM
	ST2-5KMZQJ6122	UL25KMZQJ6122	ON	NONE	MOM
	ST2-6KMZQJ6122	UL26KMZQJ6122	ON	ON	ON
	ST2-7KMZQJ6122	UL27KMZQJ6122	ON	ON	MOM
	ST2-8KMZQJ6122	UL28KMZQJ6122	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

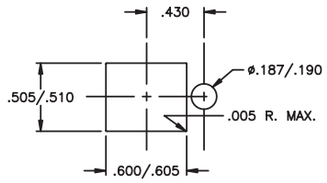
Above models have black bezel and insert.





Terminal numbers for reference only



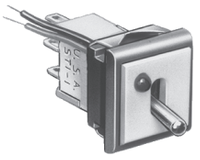


Panel thickness range .047" to .125".

Snap-in bezel with 0, 1 or 2 inboard LEDs

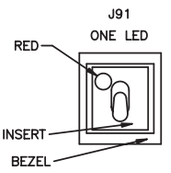
PATENT NO.
Des. 282,524

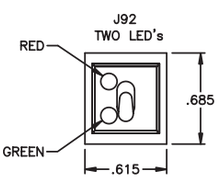
ST1-1KMZQJ9128

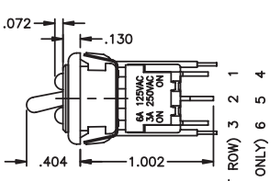


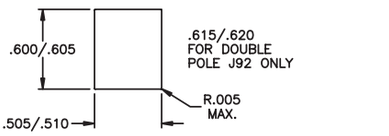
	POWER CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMZQJ9122	UL11KMZQJ9122	ON	NONE	ON
	ST1-2KMZQJ9122	UL12KMZQJ9122	ON	OFF	ON
	ST1-3KMZQJ9122	UL13KMZQJ9122	MOM	OFF	MOM
	ST1-4KMZQJ9122	UL14KMZQJ9122	ON	OFF	MOM
	ST1-5KMZQJ9122	UL15KMZQJ9122	ON	NONE	MOM
Double pole	ST2-1KMZQJ9122	UL21KMZQJ9122	ON	NONE	ON
	ST2-2KMZQJ9122	UL22KMZQJ9122	ON	OFF	ON
	ST2-3KMZQJ9122	UL23KMZQJ9122	MOM	OFF	MOM
	ST2-4KMZQJ9122	UL24KMZQJ9122	ON	OFF	MOM
	ST2-5KMZQJ9122	UL25KMZQJ9122	ON	NONE	MOM
	ST2-6KMZQJ9122	UL26KMZQJ9122	ON	ON	ON
	ST2-7KMZQJ9122	UL27KMZQJ9122	ON	ON	MOM
	ST2-8KMZQJ9122	UL28KMZQJ9122	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

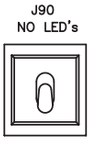
Above models have black bezel and insert.

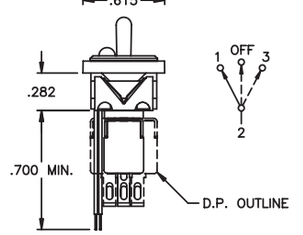


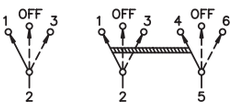












Terminal numbers for reference only

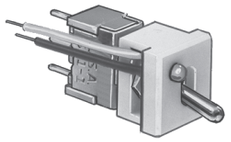
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Bezel for p.c. mounted switches with 0, 1 or 2 LEDs

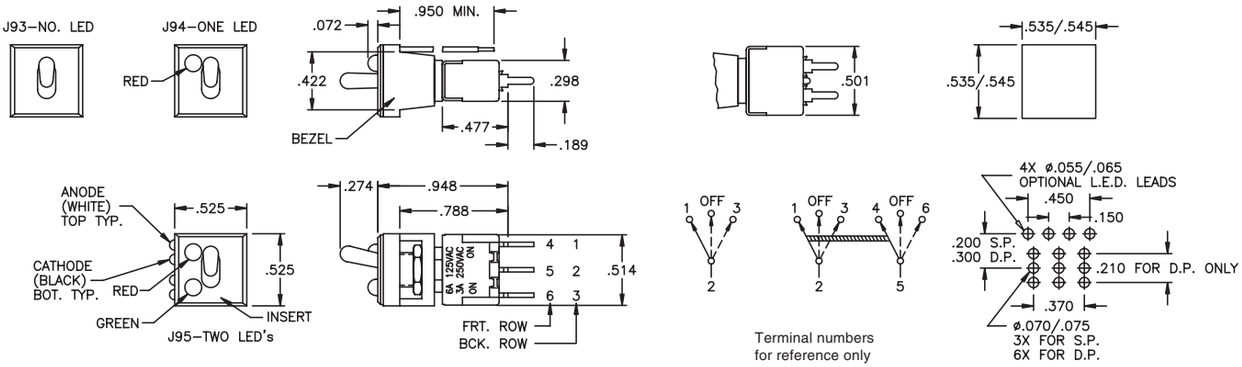
PATENT NO.
Des. 282,524

ST1-1KMCBJ9488



	DRY CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMCBJ9422	UL11KMCQJ9422	ON	NONE	ON
	ST1-2KMCBJ9422	UL12KMCQJ9422	ON	OFF	ON
	ST1-3KMCBJ9422	UL13KMCQJ9422	MOM	OFF	MOM
	ST1-4KMCBJ9422	UL14KMCQJ9422	ON	OFF	MOM
	ST1-5KMCBJ9422	UL15KMCQJ9422	ON	NONE	MOM
Double pole	ST2-1KMCBJ9422	UL21KMCQJ9422	ON	NONE	ON
	ST2-2KMCBJ9422	UL22KMCQJ9422	ON	OFF	ON
	ST2-3KMCBJ9422	UL23KMCQJ9422	MOM	OFF	MOM
	ST2-4KMCBJ9422	UL24KMCQJ9422	ON	OFF	MOM
	ST2-5KMCBJ9422	UL25KMCQJ9422	ON	NONE	MOM
	ST2-6KMCBJ9422	UL26KMCQJ9422	ON	ON	ON
	ST2-7KMCBJ9422	UL27KMCQJ9422	ON	ON	MOM
	ST2-8KMCBJ9422	UL28KMCQJ9422	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

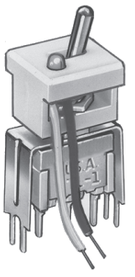
Above models have black bezel and insert.



Bezel for p.c. mounted switches with 0, 1 or 2 LEDs

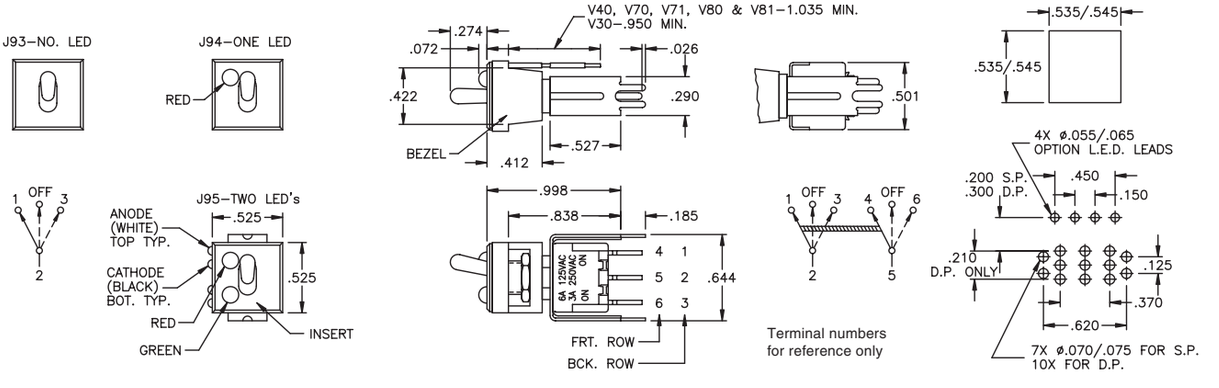
PATENT NO.
Des. 282,524

ST1-1KMV30QJ9488



	DRY CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMV30BJ9422	UL11KMV30QJ9422	ON	NONE	ON
	ST1-2KMV30BJ9422	UL12KMV30QJ9422	ON	OFF	ON
	ST1-3KMV30BJ9422	UL13KMV30QJ9422	MOM	OFF	MOM
	ST1-4KMV30BJ9422	UL14KMV30QJ9422	ON	OFF	MOM
	ST1-5KMV30BJ9422	UL15KMV30QJ9422	ON	NONE	MOM
Double pole	ST2-1KMV30BJ9422	UL21KMV30QJ9422	ON	NONE	ON
	ST2-2KMV30BJ9422	UL22KMV30QJ9422	ON	OFF	ON
	ST2-3KMV30BJ9422	UL23KMV30QJ9422	MOM	OFF	MOM
	ST2-4KMV30BJ9422	UL24KMV30QJ9422	ON	OFF	MOM
	ST2-5KMV30BJ9422	UL25KMV30QJ9422	ON	NONE	MOM
	ST2-6KMV30BJ9422	UL26KMV30QJ9422	ON	ON	ON
	ST2-7KMV30BJ9422	UL27KMV30QJ9422	ON	ON	MOM
	ST2-8KMV30BJ9422	UL28KMV30QJ9422	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

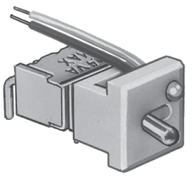
Above models have black bezel and insert.



ST SERIES - MINIATURE TOGGLE SWITCHES

Bezel for right angle p.c. mtd. switches with 0, 1 or 2 LEDs

PATENT NO.
Des. 282,524

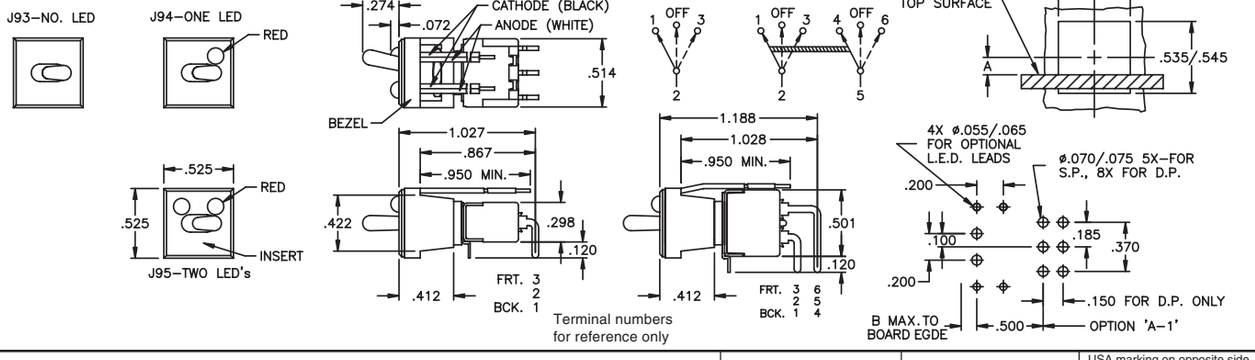


ST1-1KMA-1BJ9488

Poles	Option	Dim. A	Dim. B
SP	A	.148	.045 max.
SP	A-1	.164	.095 max.
DP	A	.250	.300 max.
DP	A-1	.266	.350 max.

	DRY CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMA-1BJ9422	UL11KMA-1QJ9422	ON	NONE	ON
	ST1-2KMA-1BJ9422	UL12KMA-1QJ9422	ON	OFF	ON
	ST1-3KMA-1BJ9422	UL13KMA-1QJ9422	MOM	OFF	MOM
	ST1-4KMA-1BJ9422	UL14KMA-1QJ9422	ON	OFF	MOM
	ST1-5KMA-1BJ9422	UL15KMA-1QJ9422	ON	NONE	MOM
Double pole	ST2-1KMA-1BJ9422	UL21KMA-1QJ9422	ON	NONE	ON
	ST2-2KMA-1BJ9422	UL22KMA-1QJ9422	ON	OFF	ON
	ST2-3KMA-1BJ9422	UL23KMA-1QJ9422	MOM	OFF	MOM
	ST2-4KMA-1BJ9422	UL24KMA-1QJ9422	ON	OFF	MOM
	ST2-5KMA-1BJ9422	UL25KMA-1QJ9422	ON	NONE	MOM
	ST2-6KMA-1BJ9422	UL26KMA-1QJ9422	ON	ON	ON
	ST2-7KMA-1BJ9422	UL27KMA-1QJ9422	ON	ON	MOM
	ST2-8KMA-1BJ9422	UL28KMA-1QJ9422	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

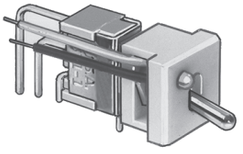
Above models have black bezel and insert.



Terminal numbers for reference only

Bezel for right angle p.c. mtd. switches with 0, 1 or 2 LEDs

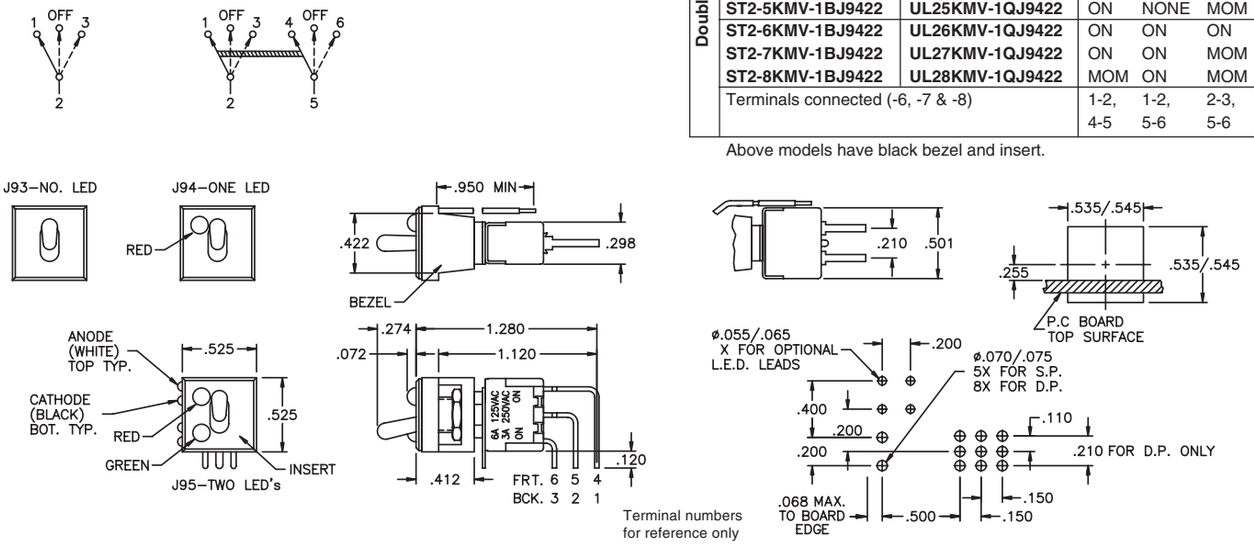
PATENT NO.
Des. 282,524



ST1-1KMV-1BJ9488

	DRY CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMV-1BJ9422	UL11KMV-1QJ9422	ON	NONE	ON
	ST1-2KMV-1BJ9422	UL12KMV-1QJ9422	ON	OFF	ON
	ST1-3KMV-1BJ9422	UL13KMV-1QJ9422	MOM	OFF	MOM
	ST1-4KMV-1BJ9422	UL14KMV-1QJ9422	ON	OFF	MOM
	ST1-5KMV-1BJ9422	UL15KMV-1QJ9422	ON	NONE	MOM
Double pole	ST2-1KMV-1BJ9422	UL21KMV-1QJ9422	ON	NONE	ON
	ST2-2KMV-1BJ9422	UL22KMV-1QJ9422	ON	OFF	ON
	ST2-3KMV-1BJ9422	UL23KMV-1QJ9422	MOM	OFF	MOM
	ST2-4KMV-1BJ9422	UL24KMV-1QJ9422	ON	OFF	MOM
	ST2-5KMV-1BJ9422	UL25KMV-1QJ9422	ON	NONE	MOM
	ST2-6KMV-1BJ9422	UL26KMV-1QJ9422	ON	ON	ON
	ST2-7KMV-1BJ9422	UL27KMV-1QJ9422	ON	ON	MOM
	ST2-8KMV-1BJ9422	UL28KMV-1QJ9422	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

Above models have black bezel and insert.



Terminal numbers for reference only

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

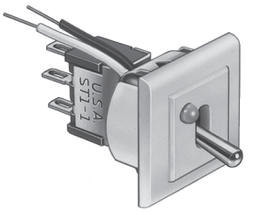
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Snap-in bezel for round hole mounting with 0, 1 or 2 LEDs

Self keying against rotation

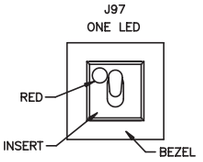
PATENT NO.
Des. 282,524

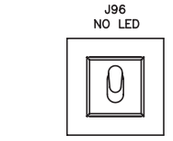
ST1-1KMZQJ9788

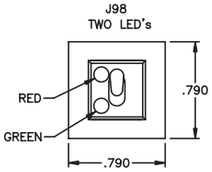


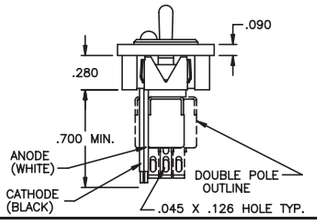
	POWER CKT. MODEL NO.	UL MODEL NO.	USA marking on opposite side		
Single pole	ST1-1KMZQJ9722	UL11KMZQJ9722	ON	NONE	ON
	ST1-2KMZQJ9722	UL12KMZQJ9722	ON	OFF	ON
	ST1-3KMZQJ9722	UL13KMZQJ9722	MOM	OFF	MOM
	ST1-4KMZQJ9722	UL14KMZQJ9722	ON	OFF	MOM
	ST1-5KMZQJ9722	UL15KMZQJ9722	ON	NONE	MOM
Double pole	ST2-1KMZQJ9722	UL21KMZQJ9722	ON	NONE	ON
	ST2-2KMZQJ9722	UL22KMZQJ9722	ON	OFF	ON
	ST2-3KMZQJ9722	UL23KMZQJ9722	MOM	OFF	MOM
	ST2-4KMZQJ9722	UL24KMZQJ9722	ON	OFF	MOM
	ST2-5KMZQJ9722	UL25KMZQJ9722	ON	NONE	MOM
	ST2-6KMZQJ9722	UL26KMZQJ9722	ON	ON	ON
	ST2-7KMZQJ9722	UL27KMZQJ9722	ON	ON	MOM
	ST2-8KMZQJ9722	UL28KMZQJ9722	MOM	ON	MOM
	Terminals connected (-6, -7 & -8)		1-2, 4-5	1-2, 5-6	2-3, 5-6

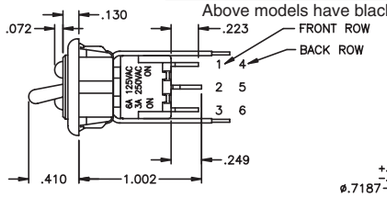
Above models have black bezel and insert.

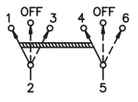




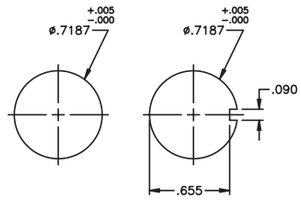








Terminal numbers for reference only



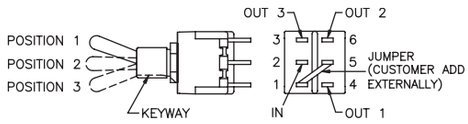
Panel thickness range .047" to .125".

MISCELLANEOUS

ST2-6, -7 & -8 SWITCHES

May be wired as a single pole 3 position switch; add external jumper between terminals 1 & 5, then -

Common terminal is 2
Output 1 - terminal 4
Output 2 - terminal 6
Output 3 - terminal 3



QUICK-CONNECT RECEPTACLES that are compatible with solder lug or p.c. terminals are commercially available - consult factory.

FRONT PANEL SEAL: Silicone rubber boots for front panel sealing of the switch against high pressure water or other contaminants are available - see Waterproof switch sealing boots section of catalog.

HARDWARE SUPPLIED

(See Hardware section of catalog)

Switches with M and Y option bushings are supplied with (2) A112 Hex Nuts, (1) A115 Lockwasher and (1) A107 Anti-rotate Ring.

Switches with D bushings are supplied with (2) A112 Hex Nuts and (1) A115 Lockwasher.

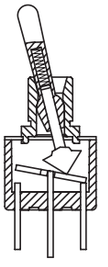
Switches with H option bushing are supplied with (1) A112 Hex Nut, (1) A115 Lockwasher and (1) A257 Gasket.

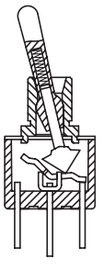
Switches with M4 and M5 bushings are supplied with (2) A465 Hex Nuts, (1) A466 Lockwasher and (1) A482 Anti-rotateRing.

Note: Switches with non-threaded bushings or bezels supplied without hardware.

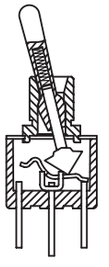
TYPICAL SWITCH CROSS SECTIONS

Note: Contacts make opposite actuator direction.


ON NONE ON


ON OFF ON

MOM OFF MOM


ON OFF MOM

ON NONE MOM

ST SERIES - MINIATURE TOGGLE SWITCHES

Additional ordering information: Commonly ordered models are shown on prior pages with complete model numbers and specifications. Below is an order format that enables you to 'build your own switch' and specify the correct switch model number by simply selecting from all available options shown and filling in the boxes.

'BUILD YOUR OWN SWITCH' ORDER FORMAT

Fill in boxes with selections shown for **Model Structure**, then add **Options** selections for complete model number. Allowable options are shown below each respective box with brief description - see option dwgs. & info. following. Note: 'NONE' indicates box may be left empty.

Model Structure:

Series

Single pole:
S T 1 -
S.P. UL model:
U L 1
Double pole:
S T 2 -
D.P. UL model:
U L 2

Electrical functions

1	0N	N0NE	0N
2	0N	0FF	0N
3	M0M	0FF	M0M
4	0N	0FF	M0M
5	0N	-	M0M

Following for DP only

6	0N	0N	0N
7	0N	0N	M0M
8	M0M	0N	M0M

Actuators

K Standard bat
F 1 Flatted
F 2 Long flatted
F 3 Short flatted
L Long round
L 1 Medium rnd.
L 2 Short round
L 3 Short round
Following for M4 & M5 bushings only
T 1 Large bat
T 2 Long large bat
T 3 T1 with keying
T 4 T2 with keying

Bushings

M Standard 1/4" thd'd.
D 'D' flat 1/4" thd'd.
H Splashproof 1/4" thd'd.
Y Long 1/4" thd'd.
S 2 Non-threaded
S 3 Short non-thd'd.
M 4 15/32" thd'd.
M 5 M4 with 'o'-ring

Terminations

Z Solder lug
C Printed circuit
W Wirewrap
W 1 Lg. wirewrap
W 3 Sht. wirewrap
X Extra lg. wirewrap
Horiz. right angle p.c. terminals:
A
A - 1
Vertical right angle p.c. terminals:
V
V - 1
V - 2
Straight p.c. terminals w/brkt.:
V 3 0
V 3 1
V 4 0
V 4 1
V 7 0
V 8 0
V 7 1
V 8 1

Contact material

B Gold
Q Coin silver
G Gold/coin silver
N Economy gold
T Economy silver

Note: When switch is ordered with a bezel, actuator selection may be **K, L, L1, or L2** and bushing must be **M** only.

Options:

Sealing

(NONE)
E Epoxy

Colored actuator*

(NONE)
2 Black

Colored bushing*

(NONE)
2 Black

* colored actuator and bushing applicable to non-bezel models only

Bezel& Insert

(NONE)
J 6 1 Snap-in w/LED
J 9 0 Snap-in no LED
J 9 1 Snap-in w/LED
J 9 2 Snap-in w/2 LEDs
J 9 3 p.c. no LED
J 9 4 p.c. w/LED
J 9 5 p.c. w/2 LEDs
Self-keying round hole mt.:
J 9 6 Snap-in no LED
J 9 7 Snap-in w/LED
J 9 8 Snap-in w/2 LEDs

Bezel color

(NONE)
2 Black
6 Red
8 White

Insert color

(NONE)
2 Black
6 Red
8 White

Approvals

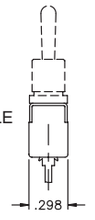
(NONE)
/ C S A

Although most combinations of options are available, some may result in incompatibilities. Consult factory if there is any question.

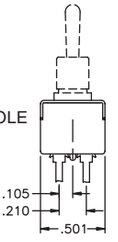
Example of completely specified model number:
UL15KMZQEJ9726/CSA

SWITCH BODY SIZES WITH TERMINAL LOCATION DIMENSIONS

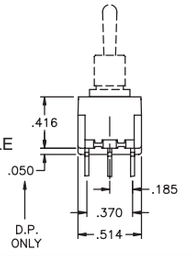
SIDE VIEW
SINGLE POLE



SIDE VIEW
DOUBLE POLE



FRONT VIEW
SINGLE AND
DOUBLE POLE

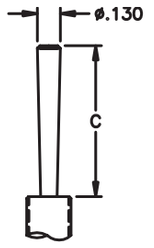


SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

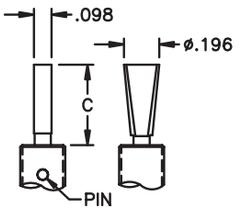
ST SERIES - MINIATURE TOGGLE SWITCHES

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

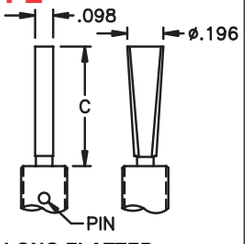
ACTUATOR OPTIONS

L


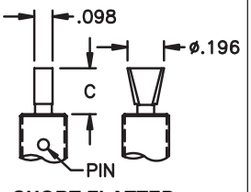
LONG ROUND

F1


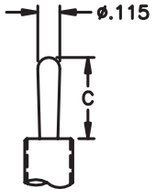
FLATTED

F2


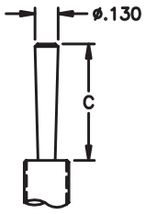
LONG FLATTED

F3


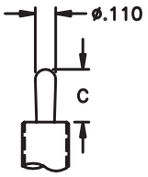
SHORT FLATTED

K (STANDARD)


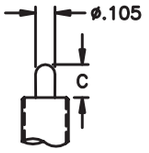
ROUND

L1


MEDIUM ROUND

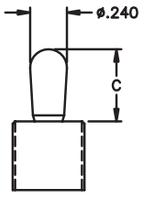
L2


SHORT ROUND

L3


SHORT ROUND

T1 & T2
(FOR M4 & M5 BUSHINGS ONLY)



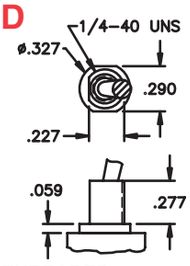
LONG & SHORT ROUND

T3 & T4

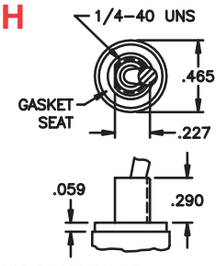
Same as T1 & T2 respectively except with positive internal keying and sideways support to provide more ruggedness in harsh applications.

Available only with M4 bushing

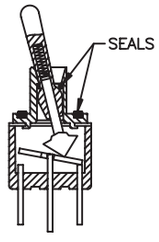
BUSHING OPTIONS

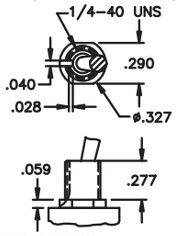
D


THREADED

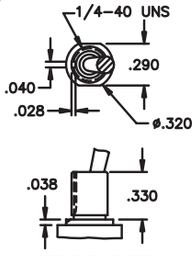
H


SPLASHPROOF

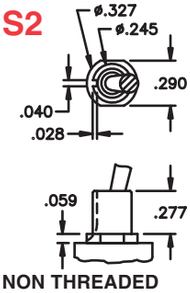


M (STANDARD)


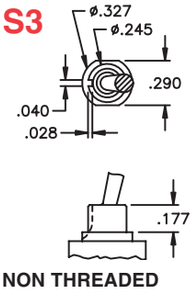
THREADED

Y


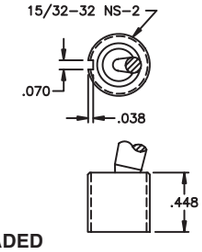
LONG THREADED

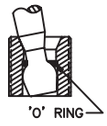
S2


NON THREADED

S3


NON THREADED

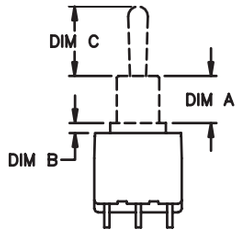
M4 & M5




M5 FEATURES 'O'-RING FOR SPLASHPROOF APPLICATIONS

THREADED

ACTUATOR & BUSHING COMPATIBILITY TABLE WITH DIMENSIONS FOR SELECTIONS



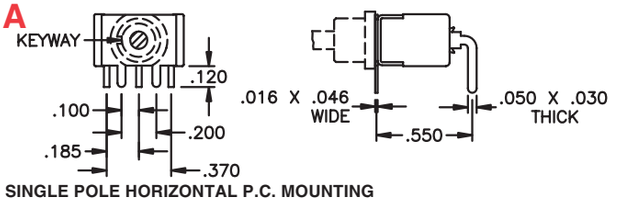
Bushing Option	Bushing Dims. Dim A	Dim B	Actuator length dimension C F1	F2	F3	K	L	L1	L2	L3	T1	T2
D	.277	.060	N/A	N/A	N/A	.410	.840	.640	.270	.170	N/A	N/A
H	.290	.060	N/A	N/A	N/A	.410	.840	.640	.270	.170	N/A	N/A
M	.277	.060	.450	.650	.250	.410	.840	.640	.270	.170	N/A	N/A
Y	.330	.040	N/A	N/A	N/A	.410	.840	.640	.270	.170	N/A	N/A
S2	.277	.060	.450	.650	.250	.410	.840	.640	.270	.170	N/A	N/A
S3	.177	.060	N/A	N/A	N/A	.510	.940	.740	.370	.270	N/A	N/A
M4	.448	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.460	.687
M5	.448	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.460	.687

N/A - NOT AVAILABLE CONSULT FACTORY FOR SPECIAL REQUIREMENTS

ST SERIES - MINIATURE TOGGLE SWITCHES

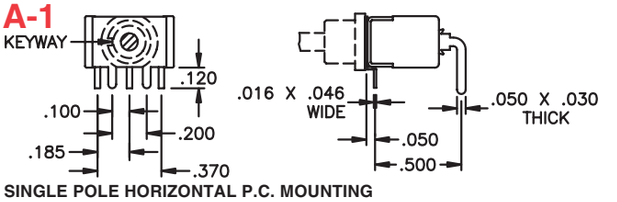
TERMINATION OPTIONS

A



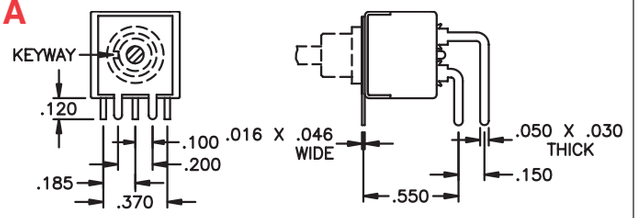
SINGLE POLE HORIZONTAL P.C. MOUNTING

A-1



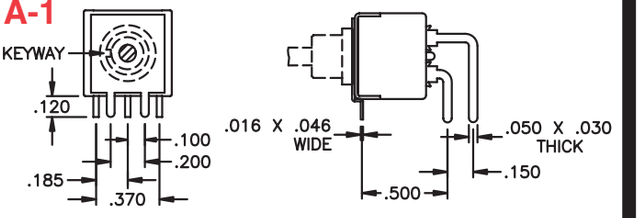
SINGLE POLE HORIZONTAL P.C. MOUNTING

A



DOUBLE POLE HORIZONTAL P.C. MOUNTING

A-1



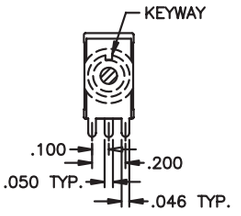
DOUBLE POLE HORIZONTAL P.C. MOUNTING

V, V-1 & V-2

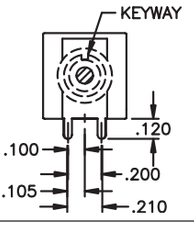
Option	Dim. A	Dim. B
V	.550	.150
V-1	.500	.150
V-2	.500	.100

VERTICAL P.C. MOUNTING

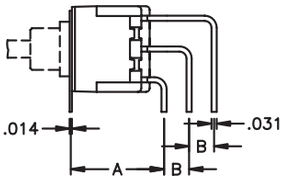
FRONT VIEW SINGLE POLE



FRONT VIEW DOUBLE POLE

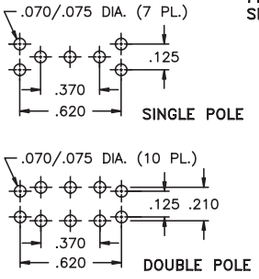


SIDE VIEW - SINGLE & DOUBLE POLE



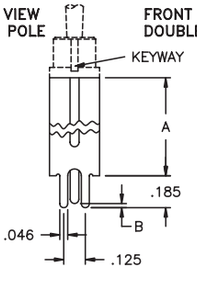
V30, V40, V70, V80, V31, V41, V71 & V81

PANEL LAYOUT
V30, V31, V40 & V41

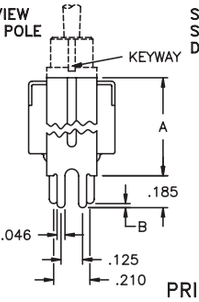


Option	Dim. A	Dim. B
V30-V31	.527	.024
V40-V41	.647	.048

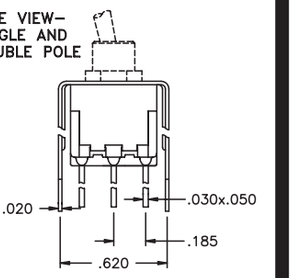
FRONT VIEW SINGLE POLE



FRONT VIEW DOUBLE POLE

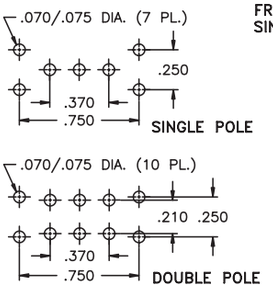


SIDE VIEW– SINGLE AND DOUBLE POLE



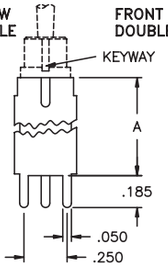
PRINTED CIRCUIT MOUNTING

PANEL LAYOUT
V70, V71,
V80 & V81

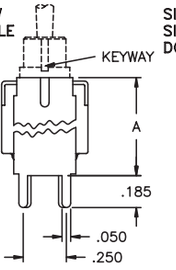


Option	Dim. A
V70-V71	.630
V80-V81	.953

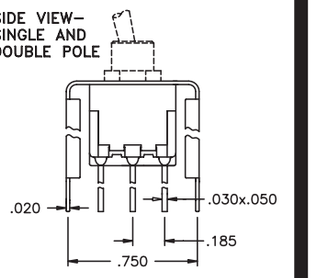
FRONT VIEW SINGLE POLE



FRONT VIEW DOUBLE POLE

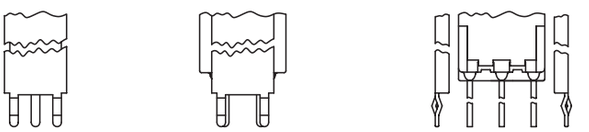


SIDE VIEW– SINGLE AND DOUBLE POLE



PRINTED CIRCUIT MOUNTING

V31, V41, V71 & V81 ARE THE SAME AS V30, V40, V70 & V80 RESPECTIVELY, EXCEPT WITH CRIMPED LEG DESIGN FOR P.C. BOARD RETENTION, AS SHOWN TO RIGHT.



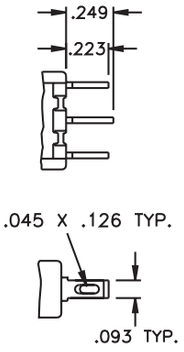
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

A45-A58 56 09:09:2000, 5:22 PM

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

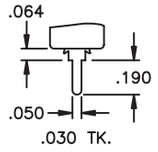
TERMINATION OPTIONS (CONT'D.)

Z



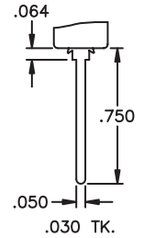
SOLDER LUG

C



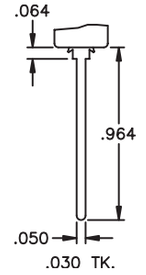
PRINTED CIRCUIT

W



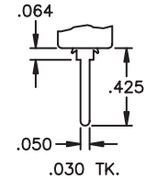
WIREWRAP

W1



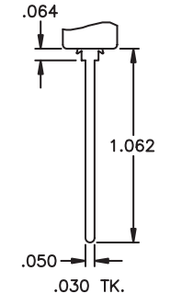
LONG WIREWRAP

W3



SHORT WIREWRAP

X



EXTRA LG. WIREWRAP

CONTACT MATERIAL OPTIONS

B
Dry circuit - gold over nickel over brass.
RATING: 0.4 Volt-Amps (VA) max. at 20 V max.
ELECTRIC LIFE: 100,000 cycles min. (ST1-1 & ST2-1 only - other models 40,000 cycles min.)

Q
Power circuit - coin silver.
RATING: 6 Amps at 125 VAC, 3 Amps at 250 VAC or 7 Amps at 30 VDC (resistive loads).
ELECTRIC LIFE: 100,000 cycles min. (ST1-1 & ST2-1 only - other models 40,000 cycles min.)

G
Dry circuit or power circuit - gold over nickel over coin silver.
RATINGS & ELECTRIC LIFE: Same as B & Q above - i.e. - can be used in either dry circuit or power circuit, however once used in power circuit, switch cannot be re-used in dry circuit. This option satisfies those customers who have both dry circuit and power circuit requirements, but prefer to inventory only one switch for both.

N
Dry circuit - gold over nickel over brass. Note- less gold than B option.
RATING: 0.4 Volt-Amps (VA) max. at 20 V max.
ELECTRIC LIFE: 10,000 cycles min. at 13 cycles per minute.

T
Power circuit - Silver plate over brass.
RATING: 3 Amps at 125 VAC or 1.5 Amps at 250 VAC (resistive loads).
ELECTRIC LIFE: 10,000 cycles min. at 13 cycles per minute.

Solder dipped terminals and custom contact plating available - contact factory.

UL & CSA OPTIONS

UL
For power circuits - coin silver
RATING: 6 Amps at 125 VAC or 3 Amps at 250 VAC (75% power factor).
Underwriter Laboratories file no. E66367. To specify, order UL model no. Note - applicable only to terminations with coin silver contacts (Q or G options).

CSA
For power circuits - coin silver
RATING: 6 Amps at 125 VAC or 3 Amps at 250 VAC (75% power factor). Canadian Standards Association file no. LR54592-1. To specify, UL model number, then add '/CSA' to complete switch number. Note - applicable only to terminations with coin silver contacts (Q or G options) as CSA recognizes switches for power applications only.

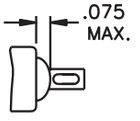
SEALING & MISCELLANEOUS OPTIONS

E

Epoxy terminal sealing: Available with all terminal configurations.

The space between terminal & case hole is sealed with epoxy all around terminal.

Provides maximum protection from entry of flux or contaminants into the switch case.



/R

To specify reverse switch action on non-symmetrical models with bushing keyway, add '/R' to switch model no.

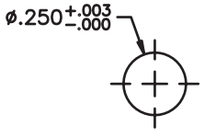
22

Black finish is available on actuator, bushing & hardware. To specify, add '-22' to switch model no.

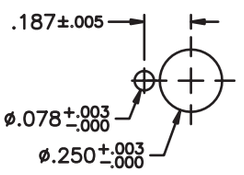
ST SERIES - MINIATURE TOGGLE SWITCHES

PANEL CUT-OUTS

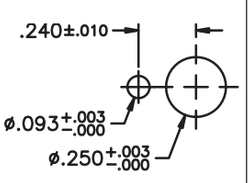
Cut-outs that accept all 1/4-40 threaded bushings:



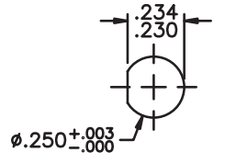
Without keying



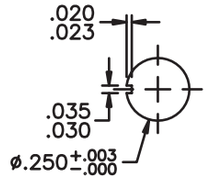
With A107 anti-rotate ring



With A158 anti-rotate ring

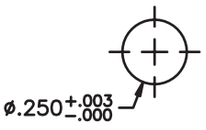


With D bushing



With slotted keyway bushings

Cut-outs that accept non-threaded 1/4"bushings and 15/32" threaded bushings:



Accepts all non-threaded 1/4" bushings

15/32" threaded bushings

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

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